

RAW SEQUENCE LISTING

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Application Serial Number: 10/540,063

Source: P4710

Date Processed by STIC: 7/1/05

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RAW SEQUENCE LISTING

DATE: 07/01/2005

PATENT APPLICATION: US/10/540,063

TIME: 15:16:09

Input Set : A:\Sequence Listing - 13311-00008-US.txt

Output Set: N:\CRF4\07012005\J540063.raw

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3 <110> APPLICANT: Geigenberger, Peter
4      Langer, Anke
5      Vigeolas, Helene
6      Stitt Nigel, Marc
7      van Dongen, Joost T.
8      Udvardi, Michael
10 <120> TITLE OF INVENTION: METHOD FOR ALTERING THE CONTENT OF RESERVE SUBSTANCES IN
PLANTS
12 <130> FILE REFERENCE: 13311-00008-US
C--> 14 <140> CURRENT APPLICATION NUMBER: US/10/540,063
C--> 14 <141> CURRENT FILING DATE: 2005-06-22
14 <150> PRIOR APPLICATION NUMBER: PCT/EP2003/014774
15 <151> PRIOR FILING DATE: 2003-12-23
17 <150> PRIOR APPLICATION NUMBER: DE 102 60 707.9
18 <151> PRIOR FILING DATE: 2002-12-23
20 <160> NUMBER OF SEQ ID NOS: 6
22 <170> SOFTWARE: PatentIn version 3.3
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 444
27 <212> TYPE: DNA
28 <213> ORGANISM: Lotus japonicus
30 <220> FEATURE:
31 <221> NAME/KEY: CDS
32 <222> LOCATION: (1)..(444)
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37 1          5          10          15
39 aca ttc aag aaa aac ctt cct acc aac agt gtt ttg ttc tac acc gtt      96
40 Thr Phe Lys Lys Asn Leu Pro Thr Asn Ser Val Leu Phe Tyr Thr Val
41          20          25          30
43 ata ttg gag ata gca cca act gca aaa gac atg ttc tcc ttt cta aag      144
44 Ile Leu Glu Ile Ala Pro Thr Ala Lys Asp Met Phe Ser Phe Leu Lys
45          35          40          45
47 gag tct ggg cct aag cat agt cct cag ctc cag gcc cat gct gaa aag      192
48 Glu Ser Gly Pro Lys His Ser Pro Gln Leu Gln Ala His Ala Glu Lys
49          50          55          60
51 gtt ttt gca ctg act cgt gat gct gcc act caa ctc gta gca aaa gga      240
52 Val Phe Ala Leu Thr Arg Asp Ala Ala Thr Gln Leu Val Ala Lys Gly
53 65          70          75          80
55 gaa gtg aca ctt gca gat gcc agc tta ggt gct gtc cac gtt cag aaa      288
56 Glu Val Thr Leu Ala Asp Ala Ser Leu Gly Ala Val His Val Gln Lys
57          85          90          95
59 gcc gtt act gat cct cat ttc gtg gtg gtt aaa gaa gcc ctg ctt caa      336

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60 Ala Val Thr Asp Pro His Phe Val Val Val Lys Glu Ala Leu Leu Gln
61          100          105          110
63 aca gta aag gaa gca gtt ggg gcg gac gaa tgg agt gat gac ttg agc 384
64 Thr Val Lys Glu Ala Val Gly Ala Asp Glu Trp Ser Asp Asp Leu Ser
65          115          120          125
67 acc gct tgg gaa gga gca tat gat gga cta gca act gca att aag aag 432
68 Thr Ala Trp Glu Gly Ala Tyr Asp Gly Leu Ala Thr Ala Ile Lys Lys
69          130          135          140
71 gca atg ggt taa          444
72 Ala Met Gly
73 145
76 <210> SEQ ID NO: 2
77 <211> LENGTH: 147
78 <212> TYPE: PRT
79 <213> ORGANISM: Lotus japonicus
81 <400> SEQUENCE: 2
82 Met Gly Phe Thr Ala Gln Gln Glu Ala Leu Val Gly Ser Ser Tyr Glu
83 1          5          10          15
85 Thr Phe Lys Lys Asn Leu Pro Thr Asn Ser Val Leu Phe Tyr Thr Val
86          20          25          30
88 Ile Leu Glu Ile Ala Pro Thr Ala Lys Asp Met Phe Ser Phe Leu Lys
89          35          40          45
91 Glu Ser Gly Pro Lys His Ser Pro Gln Leu Gln Ala His Ala Glu Lys
92          50          55          60
94 Val Phe Ala Leu Thr Arg Asp Ala Ala Thr Gln Leu Val Ala Lys Gly
95 65          70          75          80
97 Glu Val Thr Leu Ala Asp Ala Ser Leu Gly Ala Val His Val Gln Lys
98          85          90          95
100 Ala Val Thr Asp Pro His Phe Val Val Val Lys Glu Ala Leu Leu Gln
101          100          105          110
103 Thr Val Lys Glu Ala Val Gly Ala Asp Glu Trp Ser Asp Asp Leu Ser
104          115          120          125
106 Thr Ala Trp Glu Gly Ala Tyr Asp Gly Leu Ala Thr Ala Ile Lys Lys
107          130          135          140
109 Ala Met Gly
110 145
114 <210> SEQ ID NO: 3
115 <211> LENGTH: 483
116 <212> TYPE: DNA
117 <213> ORGANISM: Arabidopsis thaliana
119 <220> FEATURE:
120 <221> NAME/KEY: CDS
121 <222> LOCATION: (1)..(483)
123 <400> SEQUENCE: 3
124 atg gag agt gaa gga aag att gtg ttc aca gaa gag caa gag gct ctt 48
125 Met Glu Ser Glu Gly Lys Ile Val Phe Thr Glu Glu Gln Glu Ala Leu
126 1          5          10          15
128 gta gtg aag tct tgg agt gtc atg aag aaa aac tca gct gaa tta ggt 96
129 Val Val Lys Ser Trp Ser Val Met Lys Lys Asn Ser Ala Glu Leu Gly

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130          20          25          30
132 ctc aaa ctc ttc atc aag atc ttt gag att gca cca aca acg aag aag 144
133 Leu Lys Leu Phe Ile Lys Ile Phe Glu Ile Ala Pro Thr Thr Lys Lys
134          35          40          45
136 atg ttc tct ttc ttg aga gac tca cca att cct gct gag caa aat cca 192
137 Met Phe Ser Phe Leu Arg Asp Ser Pro Ile Pro Ala Glu Gln Asn Pro
138          50          55          60
140 aag ctc aag cct cac gca atg tct gtt ttt gtc atg tgt tgt gaa tca 240
141 Lys Leu Lys Pro His Ala Met Ser Val Phe Val Met Cys Cys Glu Ser
142 65          70          75          80
144 gca gta caa ctg agg aaa aca ggg aaa gtt acg gtg agg gag act act 288
145 Ala Val Gln Leu Arg Lys Thr Gly Lys Val Thr Val Arg Glu Thr Thr
146          85          90          95
148 ttg aag aga ctt gga gcc agc cat tct aaa tac ggt gtc gtt gac gaa 336
149 Leu Lys Arg Leu Gly Ala Ser His Ser Lys Tyr Gly Val Val Asp Glu
150          100          105          110
152 cac ttt gag gtg gcc aag tat gca ttg ttg gag acg ata aag gag gca 384
153 His Phe Glu Val Ala Lys Tyr Ala Leu Leu Glu Thr Ile Lys Glu Ala
154          115          120          125
156 gtg ccg gag atg tgg tca ccg gag atg aag gtg gct tgg ggt cag gct 432
157 Val Pro Glu Met Trp Ser Pro Glu Met Lys Val Ala Trp Gly Gln Ala
158          130          135          140
160 tat gat cac ctt gtt gct gcc att aaa gct gaa atg aat ctt tcc aac 480
161 Tyr Asp His Leu Val Ala Ala Ile Lys Ala Glu Met Asn Leu Ser Asn
162 145          150          155          160
164 taa          483
167 <210> SEQ ID NO: 4
168 <211> LENGTH: 160
169 <212> TYPE: PRT
170 <213> ORGANISM: Arabidopsis thaliana .
172 <400> SEQUENCE: 4
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174 1          5          10          15
176 Val Val Lys Ser Trp Ser Val Met Lys Lys Asn Ser Ala Glu Leu Gly
177          20          25          30
179 Leu Lys Leu Phe Ile Lys Ile Phe Glu Ile Ala Pro Thr Thr Lys Lys
180          35          40          45
182 Met Phe Ser Phe Leu Arg Asp Ser Pro Ile Pro Ala Glu Gln Asn Pro
183          50          55          60
185 Lys Leu Lys Pro His Ala Met Ser Val Phe Val Met Cys Cys Glu Ser
186 65          70          75          80
188 Ala Val Gln Leu Arg Lys Thr Gly Lys Val Thr Val Arg Glu Thr Thr
189          85          90          95
191 Leu Lys Arg Leu Gly Ala Ser His Ser Lys Tyr Gly Val Val Asp Glu
192          100          105          110
194 His Phe Glu Val Ala Lys Tyr Ala Leu Leu Glu Thr Ile Lys Glu Ala
195          115          120          125
197 Val Pro Glu Met Trp Ser Pro Glu Met Lys Val Ala Trp Gly Gln Ala
198          130          135          140

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200 Tyr Asp His Leu Val Ala Ala Ile Lys Ala Glu Met Asn Leu Ser Asn
201 145          150          155          160
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205 <211> LENGTH: 477
206 <212> TYPE: DNA
207 <213> ORGANISM: Arabidopsis thaliana
209 <220> FEATURE:
210 <221> NAME/KEY: CDS
211 <222> LOCATION: (1)..(477)
213 <400> SEQUENCE: 5
214 atg gga gag att ggg ttt aca gag aag caa gaa gct ttg gtg aag gaa      48
215 Met Gly Glu Ile Gly Phe Thr Glu Lys Gln Glu Ala Leu Val Lys Glu
216 1          5          10          15
218 tcg tgg gag ata ctg aaa caa gac atc ccc aaa tac agc ctt cac ttc      96
219 Ser Trp Glu Ile Leu Lys Gln Asp Ile Pro Lys Tyr Ser Leu His Phe
220          20          25          30
222 ttc tca cag ata ctg gag ata gca cca gca gca aaa ggc ttg ttc tct      144
223 Phe Ser Gln Ile Leu Glu Ile Ala Pro Ala Ala Lys Gly Leu Phe Ser
224          35          40          45
226 ttc cta aga gac tca gat gaa gtc cct cac aac aat cct aaa ctc aaa      192
227 Phe Leu Arg Asp Ser Asp Glu Val Pro His Asn Asn Pro Lys Leu Lys
228          50          55          60
230 gct cat gct gtt aaa gtc ttc aag atg aca tgt gaa aca gct ata cag      240
231 Ala His Ala Val Lys Val Phe Lys Met Thr Cys Glu Thr Ala Ile Gln
232 65          70          75          80
234 ctg agg gag gaa gga aag gtg gta gtg gct gac aca acc ctc caa tat      288
235 Leu Arg Glu Glu Gly Lys Val Val Val Ala Asp Thr Thr Leu Gln Tyr
236          85          90          95
238 tta ggc tca att cat ctc aaa agc ggc gtt att gac cct cac ttc gag      336
239 Leu Gly Ser Ile His Leu Lys Ser Gly Val Ile Asp Pro His Phe Glu
240          100          105          110
242 gtg gtg aaa gaa gct ttg cta agg aca ttg aaa gag ggg ttg ggg gag      384
243 Val Val Lys Glu Ala Leu Leu Arg Thr Leu Lys Glu Gly Leu Gly Glu
244          115          120          125
246 aaa tac aat gaa gaa gtg gaa ggt gct tgg tct caa gct tat gat cac      432
247 Lys Tyr Asn Glu Glu Val Glu Gly Ala Trp Ser Gln Ala Tyr Asp His
248          130          135          140
250 ttg gct tta gcc atc aag acc gag atg aaa caa gaa gag tca taa      477
251 Leu Ala Leu Ala Ile Lys Thr Glu Met Lys Gln Glu Glu Ser
252 145          150          155
255 <210> SEQ ID NO: 6
256 <211> LENGTH: 158
257 <212> TYPE: PRT
258 <213> ORGANISM: Arabidopsis thaliana
260 <400> SEQUENCE: 6
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262 1          5          10          15
264 Ser Trp Glu Ile Leu Lys Gln Asp Ile Pro Lys Tyr Ser Leu His Phe
265          20          25          30

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267 Phe Ser Gln Ile Leu Glu Ile Ala Pro Ala Ala Lys Gly Leu Phe Ser
268          35          40          45
270 Phe Leu Arg Asp Ser Asp Glu Val Pro His Asn Asn Pro Lys Leu Lys
271          50          55          60
273 Ala His Ala Val Lys Val Phe Lys Met Thr Cys Glu Thr Ala Ile Gln
274 65          70          75          80
276 Leu Arg Glu Glu Gly Lys Val Val Val Ala Asp Thr Thr Leu Gln Tyr
277          85          90          95
279 Leu Gly Ser Ile His Leu Lys Ser Gly Val Ile Asp Pro His Phe Glu
280          100          105          110
282 Val Val Lys Glu Ala Leu Leu Arg Thr Leu Lys Glu Gly Leu Gly Glu
283          115          120          125
285 Lys Tyr Asn Glu Glu Val Glu Gly Ala Trp Ser Gln Ala Tyr Asp His
286          130          135          140
288 Leu Ala Leu Ala Ile Lys Thr Glu Met Lys Gln Glu Glu Ser
289 145          150          155

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VERIFICATION SUMMARY

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Input Set : A:\Sequence Listing - 13311-00008-US.txt

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L:14 M:270 C: Current Application Number differs, Replaced Current Application No

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date